



SEQUENCE LISTING

<110> University of Kentucky Research Foundation
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Deo, Sapna Kamalakar

<120> AEQUORIN AND OBELIN MUTANTS WITH DIFFERING WAVELENGTHS AND BIOLUMINESCENCE

<130> 050229-0421

<140> 10/811,138

<141> 2004-03-29

<160> 6

<170> PatentIn version 3.2

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<212> DNA
<213> Aequorea victoria

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Lys His Met Phe Asn Phe Leu Asp Val Asn His Asn Gly Lys Ile Ser
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Leu Asp Glu Met Val Tyr Lys Ala Ser Asp Ile Val Ile Asn Asn Leu
35 40 45

Gly Ala Thr Pro Glu Gln Ala Lys Arg His Lys Asp Ala Val Glu Ala
50 55 60

Phe Phe Gly Gly Ala Gly Met Lys Tyr Gly Val Glu Thr Asp Trp Pro
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Ala Tyr Ile Glu Gly Trp Lys Lys Leu Ala Thr Asp Glu Leu Glu Lys
85 90 95

Tyr Ala Lys Asn Glu Pro Thr Leu Ile Arg Ile Trp Gly Asp Ala Leu
100 105 110

Phe Asp Ile Val Asp Lys Asp Gln Asn Gly Ala Ile Thr Leu Asp Glu
115 120 125

Trp Lys Ala Tyr Thr Lys Ala Ala Gly Ile Ile Gln Ser Ser Glu Asp
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Cys Glu Glu Thr Phe Arg Val Cys Asp Ile Asp Glu Ser Gly Gln Leu
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Asp Pro Ala Cys Glu Lys Leu Tyr Gly Gly Ala Val Pro
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Lys His Met Phe Asn Phe Leu Asp Val Asn His Asn Gly Lys Ile Ser		
20	25	30

Leu Asp Glu Met Val Tyr Lys Ala Ser Asp Ile Val Ile Asn Asn Leu		
35	40	45

Gly Ala Thr Pro Glu Gln Ala Lys Arg His Lys Asp Ala Val Glu Ala		
50	55	60

Phe Phe Gly Gly Ala Gly Met Lys Tyr Gly Val Glu Thr Asp Trp Pro
65 70 75 80

Ala Tyr Ile Glu Gly Trp Lys Lys Leu Ala Thr Asp Glu Leu Glu Lys
85 90 95

Tyr Ala Lys Asn Glu Pro Thr Leu Ile Arg Ile Trp Gly Asp Ala Leu
100 105 110

Phe Asp Ile Val Asp Lys Asp Gln Asn Gly Ala Ile Thr Leu Asp Glu
115 120 125

Trp Lys Ala Tyr Thr Lys Ala Ala Gly Ile Ile Gln Ser Ser Glu Asp
130 135 140

Ser Glu Glu Thr Phe Arg Val Ser Asp Ile Asp Glu Ser Gly Gln Leu
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Asp Val Asp Glu Met Thr Arg Gln His Leu Gly Phe Trp Tyr Thr Met
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<213> *Obelia longissima*

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Arg Trp Ile Lys Arg His Lys His Met Phe Asp Phe Leu Asp Ile Asn
20 25 30

Gly Asn Gly Lys Ile Thr Leu Asp Glu Ile Val Ser Lys Ala Ser Asp
35 40 45

Asp Ile Cys Ala Lys Leu Glu Ala Thr Pro Glu Gln Thr Lys Arg His
50 55 60

Gln Val Cys Val Glu Ala Phe Phe Arg Gly Cys Gly Met Glu Tyr Gly
65 70 . 75 80

Lys Glu Ile Ala Phe Pro Gln Phe Leu Asp Gly Trp Lys Gln Leu Ala
85 90 95

Thr Ser Glu Leu Lys Trp Ala Arg Asn Glu Pro Thr Leu Ile Arg
100 105 110

Glu Trp Gly Asp Ala Val Phe Asp Ile Phe Asp Lys Asp Gly Ser Gly
115 120 125

Thr Ile Thr Leu Asp Glu Trp Lys Ala Tyr Gly Lys Ile Ser Gly Ile
130 135 140

Ser Pro Ser Gln Glu Asp Cys Glu Ala Thr Phe Arg His Cys Asp Leu
145 150 155 160

Asp Asn Ser Gly Asp Leu Asp Val Asp Glu Met Thr Arg Gln His Leu
165 170 175

Gly Phe Trp Tyr Thr Leu Asp Pro Glu Ala Asp Gly Leu Tyr Gly Asn
180 185 190

Gly Val Pro
195